

DOCKET NO.: TIC-0010
Application No.: 10/019,201
Office Action Dated: March 14, 2003

PATENT
REPLY FILED UNDER EXPEDITED
PROCEDURE PURSUANT TO
37 CFR § 1.116

REMARKS/ARGUMENTS

Status of the Application

Claims 1-10 are pending and stand rejected. Claims 1 and 7 have been amended. No new matter has been added to the present application.

Applicants appreciated the opportunity to discuss the present application during the July 30, 2003 telephonic interview with the Examiner. During the interview, the Examiner agreed to consider the Applicants' arguments with respect to the 35 U.S.C. § 102(b) rejection, as originally contained in Applicants' July 14, 2003 Office Action response, if such arguments were filed in connection with a Request for Continued Examination (RCE). In view of the foregoing amendments and the following remarks, Applicants respectfully request reconsideration of the present application and a Notice of Allowance.

Objections of Record

Claim 7 is objected to for containing certain informalities. Applicants have amended claim 7 by deleting "the" on line 4. Applicant has not changed "of" to "or" in lines 5 and 6 because "of" is believed to be correct. Therefore, Applicants respectfully request withdrawal of the objection to claim 7.

Claim Rejections – 35 U.S.C. § 102(b)

Claims 1-2, 4 and 6 stand finally rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Sugawara *et al.* (U.S. Pat. No. 6,060,772 and Sugawara hereinafter).

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Applicants respectfully traverse the rejection and request reconsideration because Sugawara fails to teach every element of the recited claims.

Applicants note that Sugawara discloses a power semiconductor module. The module has semiconductor chips that have control electrodes that are connected to wiring patterns formed on a controlling substrate disposed above the semiconductor chips. (Col. 2, ll. 29-38).

In light of the foregoing amendments, Applicants respectfully submit that the Examiner's rejection is moot because Sugawara does not disclose all of the limitations of newly amended claim 1. In particular, Sugawara fails to disclose a "main current electrode [arranged] *immediately above* one of said plurality of semiconductor elements or wiring pattern connected to the one of said plurality of semiconductor elements" as claimed. The Examiner points to electrode 5 of Sugawara as anticipating the main current electrode 13 of the present application.

While, and as noted in Applicants' June 3, 2003 response to the March 14, 2003 Office Action, electrode 5 may be at a slight elevation difference compared to an outer edge of insulated wiring substrate 2 (*see* Fig. 3 of Sugawara), electrode 5 is not *immediately above* the insulated wiring substrate 2 as now claimed. Instead, electrode 5 is located to the side of the insulated wiring substrate 2. Applicants respectfully submit that main current electrode 13 of the present invention is arranged *immediately above* a top surface of thermal conductor base board 3 rather than slightly above and beside an outer edge of such board 3 (*see* application, as filed, p. 13, l. 13 – p. 14, l. 8; Figs. 5B, 6 and 7). Therefore, contrary to the Examiner's assertions in the comments to the June 20, 2003 Advisory Action, electrode 5 of Sugawara cannot anticipate the main current electrode 13 of the present application that is

arranged “*immediately above* one of said plurality of semiconductor elements...” as claimed. Support for the language in which the electrode 13 is “immediately” above the elements can be found at p. 14, ll. 1-2, of the specification.

Because Sugawara does not recite all the limitations of claim 1 as amended, Applicants respectfully submit that Sugawara does not anticipate claim 1. As claims 2, 4 and 6 ultimately depend from claim 1, Applicants respectfully submit that claims 2, 4 and 6 are also not anticipated by Sugawara for the reasons explained above.

Claim Rejections – 35 U.S.C. § 103(a)

Claim 3 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sugawara in view of Bryan (U.S. Pat. No. 3,735,057 and Bryan hereinafter). Claim 5 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sugawara in view of Dubelloy (U.S. Pat. No. 5,495,889 and Dubelloy hereinafter). Claims 7-10 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sugawara in view of Ota *et al.* (JP 6-283639 and Ota hereinafter).

Applicants respectfully traverse the Examiner’s rejection of claims 3 and 5. As discussed above concerning newly amended claim 1, Sugawara fails to disclose main current electrode 13 of the present application that is arranged “*immediately above* one of said plurality of semiconductor elements...” as claimed. Applicants respectfully submit that both Bryan and Dubelloy are devoid of teachings that would suggest the subject matter of claims 3 and 5 in the context of a semiconductor device having a main current electrode formed *immediately above* semiconductor elements as in claim 1. Accordingly, Applicants

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respectfully submit that claims 3 and 5 patentably defines over Sugawara in view of Bryan or Dubelloy.

With respect to claims 7-10, the Examiner stated in the Advisory Action dated July 24, 2003, that the claimed invention was not structurally distinguished over Sugawara. Applicants respectfully note that the metal member of claim 7 has “a main current electrode ... and a terminal ... formed integrally” thereon, and is “arranged in a position apart from said substrate by using [the] case *without directly contacting [the] substrate.*” Sugawara does not disclose these structural limitations.

Instead of disclosing such a metal member, for example, Sugawara discloses an electrode 14 – which the Examiner has equated to the metal member of the present invention – that is placed *on a controlling substrate 11*. (See col. 4, l. 58 – col. 5, l. 10; Figs. 3, 8-10). Therefore, while electrode 14 may be apart from the wiring substrate 2, the electrode 14 is *in direct contact* with the controlling substrate 11. As a result, the electrode 14 also fails to use a case to maintain a position apart from the controlling substrate 11 as claimed. In addition, the electrode 14 of Sugawara does not have a terminal formed integrally thereon, as is the case in the claimed invention. Furthermore, the electrode 14 is adapted “for receiving signals from outside,” and is therefore not a “main current electrode” as claimed. Accordingly, Sugawara fails to teach or suggest a metal member on which a main current electrode and a terminal are formed integrally, and is arranged in a position apart from a substrate by using a case without directly contacting the substrate as claimed.

Applicants again respectfully submit that Ota fails to cure the deficiencies of Sugawara. In particular, Applicants respectfully contend that Ota is devoid of teachings that would suggest the subject matter of claim 7 in the context of *a member on which a main*

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current electrode and a terminal are formed integrally as claimed. (see, e.g., Translation, p. 1, ll. 9-14; Fig. 1). Accordingly, Applicants respectfully submit that claims 7-10 patentably define over Sugawara in view of Ota.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that the pending claims patentably define over the prior art. Accordingly, a Notice of Allowance are respectfully requested. In the event that the Examiner believes that the present application is not allowable for any reason, the Examiner is encouraged to contact the undersigned attorney to discuss resolution of any remaining issues.

Respectfully submitted,

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